

Notice of Allowability

Application No.

10/004,646

Applicant(s)

UDAGAWA, JIN

Examiner

Christopher M. Kalivoda

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment received October 20, 2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 20 October 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 3 <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No. _____ | 7 <input type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other _____ |

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: The Applicant filed an amendment received on October 20, 2003. In this amendment, Applicant amended the drawings, claims and specification. No new matter was introduced.

Regarding the drawings, the proposed drawing changes and replacement sheet are approved. Accordingly, the previous objection to the drawings is withdrawn.

Regarding the specification, the proposed changes are approved. Accordingly, the previous objection to the specification is withdrawn.

Regarding amended claim 15, a review of prior art failed to disclose or make obvious a microlithography apparatus device comprising a temperature control device comprising a respective sensor associated with at least one component of the CPB optical system, a temperature monitoring device to which the sensor is connected configured to receive temperature detection signals from the sensor to ascertain whether the temperature signals indicate the existence of a temperature anomaly and to produce respective temperature control commands, and a controller to which the temperature monitoring device is connected, the controller being configured to receive temperature control commands from the temperature monitoring device and if the temperature control commands indicate existence of a temperature anomaly, to initiate

at least one action selected from triggering an alarm, stopping exposure and calibration of the microlithography system.

Regarding amended claim 20, a review of prior art failed to disclose or make obvious a method for fabricating a microelectronic device comprising performing a microlithography method using a CPB apparatus including a temperature control device including a respective temperature sensor associated with each component of the illumination optical system and projection optical system, a temperature monitoring device and a controller wherein the temperature monitoring device is connected to the temperature sensors and is configured to receive the respective temperature detection signals from the temperature sensor to ascertain whether the temperature detection signals indicate existence of a temperature anomaly and to produce respective temperature control commands and wherein the controller is connected to the temperature monitoring device and is configured to receive the temperature control commands from the temperature monitoring device and if the temperature control commands indicate existence of a temperature anomaly, to initiate at least one action selected from triggering an alarm, stopping exposure, and calibration for the microlithography system.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,238,830 to Rangarajan et al describes a microlithography device with a temperature sensor and monitoring device. In addition, U.S. Patent 5,834,785 to Coon describes temperature control in a lithography system. However, these references are silent with respect to temperature control associated with components of the CPB **optical** system. Rather, these patents describe monitoring temperature of the photoresist or substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (703)-305-7443. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (703)-308-4116. The fax phone number for the organization where this application or proceeding is assigned is (703)-872-9306.

Application/Control Number: 10/004,646
Art Unit: 2881

Page 5

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

cmk
December 12, 2003

A handwritten signature in black ink, appearing to be 'MCD', is located in the lower right quadrant of the page. The signature is stylized and cursive.